Appendix C: Potential Transition and Infusion Opportunities

NASA has several programs and initiatives that help to drive the Agency's overall mission and goals. Many of the subtopics within the STTR program touch on these mission and goals and are possible areas for STTR funded SBCs to consider for future technology transition and infusion opportunities. Some examples of where NASA is making investments to meet these goals are:

Climate - NASA is increasing investments in climate research due to the dangers to humanity posed by climate change, including the economic and national security impacts of this threat. These investments increase our ability to better understand our own planet and how it works as an integrated system. This will require an array of instruments, platforms, and missions to deliver the highest priority data to create a 3D view of our Earth, from atmosphere to bedrock. It will also require innovation in clean energy technology, particularly technologies that enable sustainable aviation.

Moon to Mars - NASA will lead an innovative and sustainable program of exploration with commercial and international partners to send humans farther into space and bring back to Earth new knowledge and opportunities.

Commercial Lunar Payload Services (CLPS) - NASA is working with several American companies to deliver science and technology to the lunar surface through the CLPS initiative.

Flight Opportunities (Flight Opps) – This NASA program rapidly demonstrates promising technologies for space exploration, discovery, and the expansion of space commerce through suborbital testing with industry flight providers. The program matures capabilities needed for NASA missions and commercial applications while strategically investing in the growth of the U.S. commercial spaceflight industry. Offerors are encouraged to consult with the Flight Opportunities team and their resources for any technology development that benefits from microgravity testing.

International Space Station (ISS) - Conducting experiments on the International Space Station (ISS) is a unique opportunity to eliminate gravity as a variable, provide exposure to vacuum and radiation, and have a clear view of the Earth and space.

Below is a listing of all the STTR subtopics by focus area and a designation of potential transition and infusion opportunities available to each subtopic. Offerors should think of this as a starting point; however, offerors are encouraged to consider these opportunities and their resources for advancing technology development under any of the subtopics.

NASA is not placing any priority on subtopics or awards that fall under these specific opportunities, but rather this is to assist in future planning. Offerors that submit a proposal under a subtopic that is aligned with these opportunities do not increase their chance for an award.

Subtopic #	Subtopic Title	Climate	Moon to Mars	CLPS	Flight Opps	ISS
Focus Area 3 Autonomous Systems for Space Exploration						
T10.05	Integrated Data Uncertainty Management and Representation for Trustworthy and Trusted Autonomy in Space	Yes	Yes	Yes		Yes
Focus Area 4 Robotic Systems for Space Exploration						

Subtopic #	Subtopic Title	Climate	Moon to Mars	CLPS	Flight Opps	ISS
T7.04	Lunar Surface Site Preparation		Yes	Yes	Yes	
Focus Area 5 Communications and Navigation						
T5.04	Quantum Communications		Yes	Yes	Yes	Yes
Focus Area 6 Life Support and Habitation Systems						
T6.08	Textiles for Extreme Surface Environments and High Oxygen Atmospheres		Yes	Yes	Yes	Yes
Focus Area 8 In-Situ Resource Utilization						
T14.01	Advanced Concepts for Lunar and Martian Propellant Production, Storage, and Usage		Yes	Yes	Yes	Yes
T7.05	Climate Enhancing Resource Utilization	Yes	Yes			Yes
Focus Area 9 Sensors, Detectors, and Instruments						
T8.06	Quantum Sensing/Measurement and Communciation		Yes	Yes	Yes	Yes
T8.07	Photonic Integrated Circuits		Yes	Yes	Yes	Yes
Focus Area 12 Entry, Descent, and Landing Systems						
T9.02	Rapid Development of Advanced High-Speed Aerosciences Simulation Capability		Yes	Yes	Yes	
Focus Area 15 Materials Research, Advanced Manufacturing, Structures, and Assembly						
T12.01	Additively Manufactured Electronics for Severe Volume Constrained Applications		Yes		Yes	Yes
T12.08	Manufacturing and Construction of Lunar Landing Pads Research		Yes		Yes	Yes
T12.09	Carbon Fiber Reinforced Thermoplastic Composites for Repurposable Aerospace Applications		Yes		Yes	Yes
Focus Area 16 Ground & Launch Processing						
T13.01	Intelligent Sensor Systems		Yes	Yes	Yes	Yes
Focus Area 18 Air Vehicle Technology						
T15.04	Full-Scale (Passenger/Cargo) Electric Vertical Takeoff and Landing (eVTOL) Scaling, Propulsion, Aerodynamics, and Acoustics Investigations	Yes				
Focus Area 23 Digital Transformation for Aerospace						
T11.05	Model-Based Enterprise		Yes			Yes
T11.06	Extended Reality (Augmented Reality, Virtual Reality, Mixed Reality, and Hybrid Reality)		Yes	Yes	Yes	Yes